BANGALORE BHRUHUT MAHANAGAR PALIKE

PROJECT: -PROPOSED RENOVATION AND ADDITIONAL CONSTRUCTION OF RR NAGAR CONSTITUENCY MLA OFFICE, BBMP RR NAGAR DIVISION EXECUTIVE ENGINEER & YESHWANTPUR SUB DIVISION ASSISTANT EXECUTIVE ENGINEER OFFICE BEHIND CHOWDESHWARI BUS STOP, JP PARK, WARD NO-17

Detailed Estimate for proposed Additional construction of RR Nagar Constituancy M L A office

ESTIMATED COST RS.300.00 LAKHS

INTERNAL ELECTRICAL WORKS

B.O.Q for Main Building as per SR 2016-2017 - Bangalore Circle for civil works , SR 2014 -2015 Bangalore circle for Electrical works

Sl No	Description of work	Unit	No	Dimensions			Quantity	Rate in Rs.	Amount in Rs.
			N1	L	B	D			
1	Point wiring using copper wire without switch								
	Supplying and wiring adopting loop system in existing PVC Conduit / casing caping using 1100V grade, copper conductor flecxible multistrand FRLS PVC insulated, 2x.1.5Sqmm cable confirming to the GTP without switch, the other end of the wires shall be terminated with sufficient loose length in a wood/ PVC round block.complete for each outlet.								
	Point wirig using class A Materials								
	a) Short point upto 3.0M from tapping point to outlet via switch box	Each							
	Item no 2-2.3.1,-P No-5 Ele SR14-15								
	MLA office		1	20.00			20.00		
	Ampi theater		1	10.00			10.00		
							30.00	144.00	**4320.00**
	b) Medium point above 3.0M upto 6.0M from tapping point to outlet via switch box								
	Item no 2-2.3.2- P No 5Ele SR14-15	Each							
	MLA office		1	20.00			20.00		
	Ampi theater		1	10.00			10.00		
							30.00	215.00	**6450.00**
	c) Long point above 6.0M upto 10.0M from tapping point to outlet via switch box								
	Item no 2-2.3.3-P No 5Ele SR14-15	Each							
	MLA office		1	5.00			5.00		
	Ampi theater		1	5.00			5.00		
							10.00	334.00	**3340.00**
	d) Two outlet in a row, above 3.0M upto 6.0M from tapping point to outlet via switch box								
	Item no 2-2.3.4-P No 6 Ele SR14-15	Each							
	MLA office		1	4.00			4.00		
	Ampi theater		1	4.00			4.00		
							8.00	423.00	**3384.00**
	e) Three outlet in a row, above 6.0M upto 10.0M from tapping point to outlet via switch box								
	Item no 2-2.3.5-P No 6 Ele SR14-15	Each							
	MLA office		1	4.00			4.00		
	Ampi theater		1	4.00			4.00		
							8.00	593.00	**4744.00**
2	Supplying and flush mounting powder coated / galvanized metal box suitable for mounting modular switch plates. The box should be firmly flush mounted after due groove cutting in Brick/Stone/C.Cwall								
	d) 8Way	Each							
	MLA office		1	5.00			5.00		
	Ampi theater		1	5.00			5.00		
	Item no 3- 3.5.4-P No 15						10.00	140.00	**1400.00**
	e) 10-12Way	Each							
	Item no 3-3.5.5-P No 15								
	MLA office		1	4.00			4.00		
	Ampi theater		1	4.00			4.00		
							8.00	159.00	**1272.00**

Sl No	Description of work	Unit	No	Dimensions			Quantity	Rate in Rs.	Amount in Rs.
			N1	L	B	D			
3	Supplying and fixing superior quality modular switch mounting polycarbonate plate with necessary supporting back plate with required nos. of machine screws, bolts nuts etc., complete on the existing metal/PVC box.								
	d) 8Module	Each	1	6.00			6.00	200.00	**1200.00**
	Item no3-3.6.4-P No 16								
	e) 10Module	Each	1	10.00			10.00	227.00	**2270.00**
	Item no3-3.6.5-P No 16								
	f) 12Module	Each	1	10.00			10.00	267.00	**2670.00**
	Item no 3-3.6.6-P No 16								
4	Supplying and fixing of modular switch/socket/stepped electronic fan regulator/dimmer/telephone socket etc on existing modular switch plate as per IS 3854 and IS 1293								
	Group 'A' Material								
	a) 6Amps one Way	Each	1	80.00			80.00	63.00	**5040.00**
	Item no3-3.7.1-P No 16								
	b) 6Amps Two way	Each	1	6.00			6.00	87.00	**522.00**
	Item no3-3.7.2-P No 16								
	c) 6Amps 3way socket	Each	1	40.00			40.00	95.00	**3800.00**
	Item no3-3.7.3-P No 16								
	d) Steeped fan Regulator	Each	1	20.00			20.00	286.00	**5720.00**
	Item no 3-3.7.4-P No 16								
	e) 16Amps one way switch	Each	1	14.00			14.00	114.00	**1596.00**
	3-3.7.7-P No 16								
	f) 6Amps Bell push	Each	1	2.00			2.00	87.00	**174.00**
	3-3.7.8-P No 16								
	g) 6/16Amps universal socket	Each	1	10.00			10.00	147.00	**1470.00**
	Item no 3-3.7.10-P No 16								
	h) TV/Telephone socket	Each	1	4.00			4.00	82.00	**328.00**
	Item no 3-3.7.11-P No 16								
5	Supply and fixing of 6Amps bell buzzer on existing switch board.								
	3.15.8-18	Each	1	2.00			2.00	117.00	**234.00**
	OPEN Conduit System:								
6	Supplying following size heavy guage PVC conduit pipe confirming to IS 2509 with suitable size bends, Metal/PVCjunction boxes, adhesive paste etc, and fixing using inverted wood plugs in case of RCC ceiling and RCC wall/ stone structure or rawl plug in case of brick wall and cement plastering the damaged portion using heavy gaguge saddles at an interval of 700 mm using N F screws.- (below exsisting roof)								
	a) 19mm dia 2mm thick	Mtr	1	200.00			200.00	54.00	**10800.00**
	Item no1-1.1.1- P no 2								
	b) 25mm dia 2mm thick	Mtr	1	50.00			50.00	70.00	**3500.00**
	Item no1-1.1.2- P no 2								
	CONCEALED Conduit System:								
7	Supplying heavy gauge pvc conduit pipe ...dia...mm thick with suitable size bends, metal Junction boxes adhesive paste etc..,by groove cutting in the wall and fixing by bracing U & J hooks and Cement plasteriing upto the wall surface and run wirh 18 SWG GI fish wire run throughout the conduit where ever necessary.								
a	19/ 20 mm dia 2mm thick	Mtr	1	500.00			500.00	56.00	**28000.00**
	Item no 1-1.3.1- P no 2								
b	25 mm dia 2mm thick	Mtr	1	150.00			150.00	58.00	**8700.00**
	Item no 1-1.3.2- P no 2								
8	Wiring for lighting/power circuit using one of FRLS PVC insulated 1100v grade, multisand Copper with low conductor resistance single core wire in open or concealed system of wiring with specified IS-694:1990 & confirming to GTP of Group-A.								
	a) 1.5sqmm	M	1	2000.00			2000.00	18.60	**37200.00**
	Item no-2-2.5.2- P No -6								
	b) 2.5sqmm	M	1	2500.00			2500.00	29.20	**73000.00**
	Item no2-2.5.3-P No -6								

Sl No	Description of work	Unit	No	Dimensions			Quantity	Rate	Amount
			N1	L	B	D		in Rs.	in Rs.
	c) 4sqmm	M	1	1000.00			1000.00	42.10	**42100.00**
	Item no 2-2.5.4-P No -6								
	f) 16sqmm	M	1	100.00			100.00	171.00	**17100.00**
	Item no 2-2.5.7-P No -6								
9	Supplying and fixing regular MCB distribution boards on wall / wood board / flush mounting using required clamps, bolts, nuts etc., with provision for fixing suitable type capacity MCB's single phase / 3 phase / single door with powder coated painting. Made out of 14 SWG MS enclosure.I - Single Door								
	8Way SP &N - for Security house	Each	1	2.00			2.00	866.00	**1732.00**
	Item no-6-6.17.2-P No -47								
10	Supplying and fixing regular MCB distribution boards on wall / wood board / flush mounting using required clamps, bolts, nuts etc., with provision for fixing suitable type capacity MCB's single phase / 3 phase / single door with powder coated painting. Made out of 14 SWG MS enclosure.II - Double Door								
	12Way SP & N	Each	2	2.00				1622.00	**3244.00**
	Item no-6-6.17.6 II -P No -47								
11	Supplying, fixing and wiring Earth Leakage Miniature Circuit Breaker (ELMCB) 240/450V uoto 300mA sensitivity on exisiting wood/panel board.								
a	25Amps 2 pole	Each	1	2				2412.00	**4824.00**
b	32- 40 Amps 4 pole	Each	1	2				2936.00	**5872.00**
	Item no-6-6.18.3-P No -47								
12	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' type curve, indicator ON/OFF, energy cross-3 with short circuit breaking capacity of 10K and complete wiring as required. confirming to IEC 60898.								
a	5-32A SP MCB	Each	20					418.00	**8360.00**
	Item no-6-6.16.1-P No -47								
c	5-32AMPS DB MCB	Each	6					849.00	**5094.00**
	Item no-6-6.16.4-P No -47								
13	**MAIN METER PANEL BOARD**								
	Incoming								
a	Supplying of On load change over switches 4poles, AC- 23A duty, 415V, 50Hz, AC supply.								
	100- 125 Amps								
	Page 45 Item No 6-6.11.2 Of Ele SR - 2014-2015	Each	1	1			1.00	6,426.00	**6,426.00**
b	Supplying and fixing Moulded Case Circuit Breaker (MCCB) over the existing wood/panel board using necessary screws, bolts, nuts and wiring complete.								
	125-160 Amps 4Pole25kA								
	Page 46 Item No 6-6.13.2 Of Ele SR - 2014-2015	Each	1	2			2.00	5,406.00	**10,812.00**
c	Supplying, fixing of LED type panel board indicating lamp with required colour suitable for 220VA.C 50HZ 12/24V.DC.								
	Page 48 Item No 6-6.36 Of Ele SR - 2014-2015	Each	2	3			6.00	486.20	**2,917.20**
d	Supplying 100 amps rated 3phase with neutral bus bar using requiered capacity electrolyticaluminium strips covered with heat shrinkable couloured PVC sleeve, mounted on phenolic/FRP/DMC insulator whcih are mounted on powder coated 40x6mm M.S.flat frame work in existing panel board. The bus bar shall have suitable holes for termination of incoming and outgoing cables as per IS specification with necessary bolts, nuts and washers etc., complete.								
	100Amps 4x30x6mm Alluminium Strips								
	Page 49 Item No 6-6.38.1 Of Ele SR - 2014-2015	Mtr	2	1			2.00	4,205.30	**8,410.60**
	OutGoings:								
e	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' type curve, indicator ON/OFF, energy cross-3 with short circuit breaking capacity of 10K and complete wiring as required.								
	63A TPN MCB								
	Page 47 Item No 6-6.16.6 Of Ele SR - 2014-2015	Each	1	2			2.00	2,129.60	**4,259.20**

Sl No	Description of work	Unit	No	Dimensions			Quantity	Rate in Rs.	Amount in Rs.
			N1	L	B	D			
f	Supply and fixing miniature circuit breaker on existing MCB distribution boards using necessaary fixing materials and C type curve indicator ON/OFF energy cross-3 with short circuit breaking capacity of 10K and complete wiring as required confirming to IEC 60898								
	5-32Amps DP MCB - for each meter	No.	2	1			2	849.00	**1698.00**
	32 A Neutral link for meter compartment		1	2			2	418.00	**836.00**
	PWD Electrical SR(2014-15) P-47, I-6.16.1 & 6.16.4								
g	Wiring for lighting /power circuits using one of FRLS PVC insulated 1100V grade multistrand copper with low conductor resistance single core wire in open or concealed system of wiring with specified IS -694:1990 and confirming to GTP of group A.								
	PWD Electrical SR(2014-15) P-6, I-2.5.5								
	6 Sqmm for Panel board internal wiring	Mtr	1	50			50	63.80	**3190.00**
h	Supplying and fixing angle iron frame work fabricated out of M.S.angle iron.. and M.S. flat ... with bolts, washers etc., and painted with 2 coats of red oxide and then two coats of approved paint.								
	75x75x6mm								
	Page 49 Item No 6-6.39.3 Of Ele SR - 2014-2015	Mtr	1	20			20.00	475.00	**9,500.00**
i	Fabricating supplying and mounting MS box made out... SWG suitable for floor/wall mounting, fully weather proof with provision for better heat dissipation, provided with hinged front cover,equipped with tamper proof locking arrangements, with suitable size clamps with necessary cable entry pipe with gland and box should be finished with 2coats of red oxide primer paint and finally finished with approved colour enameled metal paint etc., complete								
	14SWG								
	Page 49 Item No 6-6.40.1 Of Ele SR - 2014-2015	Sq Cm	2	15000			30000.00	0.37	**11,100.00**
j	Supplying and fixing hylum brand hand plastic sheet 3mm thick with necessary nitches for fixing switches, regulators etc.and fixing on existing wood or metal box using N.F. screws.								
	Page 17 Item No 3- 3.10 Of Ele SR - 2014-2015	Sq Cm	2	5000			10000.00	0.22	**2,200.00**
	Supply of Fittings								
14	Supplying and fixing PBBC bakelite straight or slant batten holder and wiring with 60W/230 VOLTS/18W CFL lamp								
		Each	2	10			20.00	88.00	**1,760.00**
	Item No 4-4.2-P No -20								
15	Supplying and. fixing cast Aluminium round or oblong type bulk head fitting with GI wire guard, glass cover with 15Watts 230V CFL lamp as required								
	Item no-4-4.4-P No -20	Each	2	10			20.00	952.00	**19040.00**
16	Supplying of 4' - LED PVC square batten 28Watts with high quality diffuser with life of 25000 burning hours & 70% lumen maintanance with CRI > 80. Power input: 220-240V @ 50Hz & power factor > 0.9 along with CE approved drivers. 5years warranty against any manufacturing defect working under standard electrical condition.								
	1x4'.-28Watts	Each	2	10			20.00	1774.00	**35480.00**
	Item no-4-4.29.2-P No -25								
17	Supply of 2'x2' LED recessed luminaire with ...Watts system wattage. Housing shall be with pressure die cast aluminum alloy with corrosion proof resistant polyester power coated. Driver operates with voltage range from 100V to 270V 50/60 Hz with short circuit, overload & mis-wiring protection. Lumen Maintenance of 70% at 50000 Hrs. Injection moulded poly carbonate diffuser for better mechanical stability, light transmission & avoid pot hole effect. Junction temperature shall be < 70 degree Celsius. Driver is on constant current driver @ 0.06A with PF > 0.92 with line voltage @ 220-240V @ 50/60Hz, driver efficiency > 85% & THD<15%. LED Efficiency > 130 lm/W at 1W & Fixture Efficiency >75lm/w with CRI > 75 with injection moulded Polycarbonate lens with < 80mm depth. 5 years Warranty against any manufacturing defect working under standard electrical condition								
	LED modular down light 2'x2'-36 watts	No	1	8			8.00	8242.00	**65936.00**
	Item no-4-4.31.1 & 2 -P No -25								
18	Supplying CFL Mirror light fitting with 1x11W CFL lamp, choke, perspex cover and completely wired for use on 230V 50Hz AC Supply.								

Sl No	Description of work	Unit	No	Dimensions			Quantity	Rate	Amount
			N1	L	B	D		in Rs.	in Rs.
		Each	2	4			8.00	648.00	**5184.00**
	Item no-4.23-P No -24								
19	Supplying of 1440rpm heavy duty eahust fan with bracket blades suitable for operate on 230V 50Hz, AC Supply complete.								
	15" sweep	Each	1	2			2.00	4394.00	**8788.00**
	Item no-9-9.2.2-P No -78								
20	Supplying capacitor type 48" sweep ceiling fan complete with down rod blades, shackle, canopies etc., for operation on 230 volts, 50 cycles. single phase AC supply confirminf to ISS-374-1979 and with double ball bearing system.								
	Reguler Model								
	Page,78 Item No: 9.3.1.1, Of Ele SR - 2014-2015	Each	1	4.00			4.00	2376.00	**9504.00**
21	Supplying wall mounting fan suitable to operate at single phase 230V AC Supply.								
	400mm sweep	Each	1	2			2.00	2534.00	**5068.00**
	Item no-9-9.4.2-P No -78								
22	Fixing all types and allcapacities fluorescent / false ceiling/spotlight/ CFLfittings indoor on the wall/ ceiling/rafters / girders using 23/0.0076" twin twisted RVC insulated wires, required nos of round blocks and clamps (if required)								
	a)On wall/ceiling/Rafters/Girders	Each	1	32			32.00	98.00	**3136.00**
	Item no-17-17.7.1-P No -108								
23	Fixing a ceiling/Wall mounting fan of all capacities and all types to the existing S hook together with supplying and fixing a 5 ampers ceiling rose, necessary length of 23 / 0.0076 inch PVC insulated twin twisted copper wire and wiring completely.								
		Each	1	8.00			8.00	139.00	**1112.00**
	Item no-17-17.8-P No -109								
24	Supplying & fixing...mm dia classA GI pipe bracket up to 2.7meters long terminated with a reducing collar of 40c25mm to which extra pipe of 175mm length is fixed for fixing MV/SV/MH/FTL/LED street light fitting of all capacities on rail/RCC/wall/tubularpole, using suitable clamps, bolts and nuts and wiring using suitable capacity wires etc complete.								
	Using 32mm dia GI pipe	Each	1	5			5.00	1140.00	**5700.00**
	Item no-17-17.2.2-P No -108								
25	Supplying of **1.5TR Spilt air conditioners** suitable for operation on AC Supply Single phase 50Hz 230 Volts hermetically sealed compressor with air cooled condensor, moter capcitor & start run capacitors, realy & over load protector internal unit, with one indore & one out door unit. the condencor unit will be place out side the room on the terrace to avoid noise including standerad length of suitable size copper tubing covered with insulation tube (High wall chorded/chordless) suitable capacity 3 core sheathed /PVC Copper cable & battery operated wireless remote Unit.								
	1.5 Ton Capacity	**Each**							
	Page,78 Item No: 9.6.1.2, Of Ele SR - 2014-2015		2				2.00	46408.00	**92,816.00**
26	Supply erection, testing commissioning of **Cassete type Spilt air conditioners** suitable for operation on AC Supply Single / Three phase AC Supply hermetically sealed compressor with air cooled condensor, moter capcitor & start run capacitors, realy & over load protector internal unit, with one indore & one out door unit. the condencor unit, including standerd accessoris covered with insulation tube including battery operated cordless unit.								
	For MLA Hall								
	3.0 TR Cassette 3 Ph	**Nos**							
	Page,78 Item No: 9.7.2, Of Ele SR - 2014-2015		1				1.00	103200.00	**103,200.00**
	NETWORKING & TELECOMMUNICATION								
27	Supplying and drawing PVC Flexible one pair telephone unarmoured tinned copper cable - **3 Pair**								
	page,85 Item, No: 11.2.3, Of Ele SR - 2014-2015	**Rmt**	1	500.00			500.00	16.00	**8,000.00**
28	Supplying and drawing PVC Insulated Gas injected physical Foam jelly floaded co-Axial TV Cable RG-6								
	page,85 Item, 11.3, Of Ele SR - 2014-2015	**Rmt**	1	150.00			150.00	35.00	**5,250.00**

Sl No	Description of work	Unit	No	Dimensions			Quantity	Rate in Rs.	Amount in Rs.
			N1	L	B	D			
29	Supplying & Drawing UTP- CAT 6E-LAN Cable								
	Group- A	**Rmt**	1	300.00			300.00	23.00	**6,900.00**
	page,85 Item No: 11.1, Of Ele SR - 2014-2015								
30	**Supplying & fixing of network switches.**								
	24 Port Gigabyte (Manageable)	**Each**	1	1.00			1.00	31650.00	**31,650.00**
	page,85 Item No: 11.9.2, Of Ele SR - 2014-2015								
	EARTHING								
31	Supplying fixing and wiring earth electrode for grounding of ,transformers,HT cubicles etc using 40mm dia 2.9mm thick 2.5 m long GI pipe with GI funnel with mesh and suitable size reducer fixed on the top of the electrode.The funnel should be enclosed in a CC chamber of 400x400x400mm with a cast iron cover The earth electrode shall have staggered holes of 12mm dia and the electrode should be covered 150mm all around with alternate layers of salt and charcoal form the bottom of the pipe to the bottom of the CC chamber.The connection from the electrode is to be established through GI strip using GI bolts and nuts.								
	Page 55, Item No 7.2 , Of Ele SR - 2014-2015	**Each**	2	--	--	--	2.00	4317.00	**8,634.00**
	EARTH STRIPS								
a	Supplying and running of GI / Copper strips for grounding connections using necessary fixing materials as required								
	25X3mm Copper strip	**Rmt**	2	5.00	--	--	10.00	523.00	**5,230.00**
	Page 64, Item No 7.3.6, Of Ele SR - 2014-2015								
c	25X3mm GI strip	**Rmt**	2	15.00	--	--	30.00	77.00	**2,310.00**
	Page 64, Item No 7.3.1, Of Ele SR - 2014-2015								
32	Supplying, erecting, testing and commissioning of voltage stabilizer suitable for 170 to 270 v in put and load variation from no load to full load, with over load protection, spike suppression, operating at 00 C to 400 C. Range etc., complete.								
	5KVA Capacity	Each	1	1.00	--	--	1.00	4661.00	**4,661.00**
	Page 88, Item No 12.1.1, Of Ele SR - 2014-2015								
33	Supplying, erecting, testing & commissioning of OFF-LINE UPS system suitable for operation on 230V, 50Hz, A/C supply, with all accessories complete and Excluding batteries and wiring complete.								
	5 KVA OFF LINE UPS Two Hour back up Excluding 6x 120Ah batteries								
	Page 88, Item No 12.2.6, Of Ele SR - 2014-2015	Each	1	1.00	--	--	1.00	50293.00	**50,293.00**
34	Supplying of First aid box complete	Each	1	2.00	--	--	2.00	232.20	**464.40**
	Page 363, Item No 40.116, Of Ele KPWD-SR- 2016-								
35	Provision of Solar Lighting Panels & accessories for 5 KVA capacity								
		LS							**750000.00**
									1590925.40
				Misscellaneous					**0.60**
		Total amount for Electrification work							**1590926.00**